

AMENDMENTS TO THE CLAIMS

This listing replaces all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (Currently Amended) An RF amplifier, comprising:
an RF input;
an RF power sensor to sense the power level of the RF input;
an RF power level detector connected to said power sensor;
a transmit gain control circuit connected to said level detector;
a transmit chain/path and receive circuit; and
a plurality of transmit/Receive switches for time division duplex operation
connected to said transmit chain and receive circuit.

2. (Currently Amended) ~~The RF amplifier of claim 1~~ An RF amplifier,
comprising:
an RF input;
an RF power sensor to sense the power level of the RF input;
an RF power level detector connected to said power sensor;
a transmit gain control circuit connected to said level detector;
a transmit chain/path and receive circuit; and
a plurality of transmit/Receive switches for time division duplex operation
connected to said transmit chain and receive circuit;

wherein where the receive circuit includes a bandpass filter and a low noise op amplifier disposed between said transmit/receive switches.

3. (Original) The RF amplifier of claim 2 where there are two transmit/receive switches.

4. (Original) An amplifier feedback circuit comprising;
an RF energy input means for inputting RF energy into the amplifier feedback circuit;

means for detection of said RF energy including the power level thereof;

means for comparing said RF power level with an established threshold;

means for controlling output gain of said RF power level;

means for switching between transmitting and receiving power said switch

means being operatively connected in a loop with said means for controlling output gain and a filter.

5. (Original) A method for maintaining substantially constant output from an RF amplifier independent of input power levels where the amplifier operates according to the equation

$$P_{out} = C \cdot K \cdot 10^{VR} \cdot 10^{-B \cdot \text{Log}(P_{in})} \bullet P_{in} = C \cdot K \cdot 10^{VR+B}$$

where B and C are constants, K is the constant amplifier gain, VR is a fixed reference voltage, P_{in} is the RF input power level, and P_{out} is the output power.

6. (Currently Amended) The method of maintaining substantially constant output power of an amplifier including an amplifier feedback circuit ~~according to claim~~
~~4, An amplifier feedback circuit~~ an RF energy input means for inputting RF energy into
the amplifier feedback circuit; means for detection of said RF energy including the
power level thereof; means for comparing said RF power level with an established
threshold; means for controlling output gain of said RF power level; means for
switching between transmitting and receiving power said switch means being
operatively connected in a loop with said means for controlling output gain and a filter,
the method comprising the step of operating the amplifier feedback circuit according to
the equation
$$P_{out} = C \cdot K \cdot 10^{VR} \cdot 10^{-B \cdot \text{Log}(P_{in})} \bullet P_{in} = C \cdot K \cdot 10^{VR+B}$$

where B and C are constants, K is the constant amplifier gain, VR is a fixed reference voltage, P_{in} is the RF input power level, and P_{out} is the output power.

7. (New). An RF amplifier, comprising:

- an RF input port for receiving a transmit RF input signal;
- an RF level detector for detecting a power level of the transmit RF input signal;
- an amplifier circuit operable to amplify the transmit RF input signal into a transmit RF output signal;
- a transmit gain control circuit operable to receive a level detection signal from said RF level detector and control an amount of amplification performed by said amplifier circuit based on the level detection signal;
- an RF output port operable to transmit the transmit RF output signal and further operable to receive a receive RF input signal;

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a receive circuit operable to receive the receive RF input signal from said RF output port; and

a switch operable to connect said amplifier circuit to said RF output port when the RF amplifier is in a transmit mode and connect said RF output port to said receive circuit when the RF amplifier is in a receive mode.